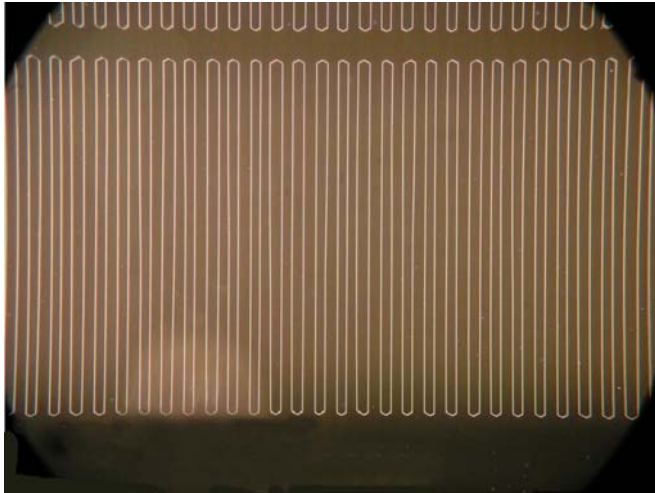




Gooch & Housego



Periodically Poled Lithium Niobate (PPLN)

G&H's Periodically Poled Lithium Niobate (PPLN) provides a highly efficient means of producing a range of IR wavelengths from currently available laser sources.

Periodically poling is a technique for achieving quasi-phase matched interactions in transparent crystal materials. By regularly reversing the sign of the effective nonlinear coefficient the phase mismatch introduced in one coherence length of material is "undone" in the next layer of material, and so on along the optical path. This technique can achieve high conversion efficiencies for relatively low power applications.

Fabricated and AR coated entirely at the facilities of G&H, these devices exhibit the same level of quality and performance typified by other G&H products.

Available in standard OPO configurations or custom patterns designed to meet specific requirements, G&H PPLN devices may be the answer to your application requirements.

Please contact the sales team for further information.

Key Features:

- High Conversion Efficiency
- Low Input Power Requirements
- Designed for IR OPOs
- Low Loss AR Coatings
- Custom Designs Available

Applications:

- IR Light Generation
- Remote Sensing
- Research & Development
- Military
- Commercial Products
- Fiber Lasers
- OPOs Pumped Near 1 μm



光技術をサポートする

株式会社オプトサイエンス

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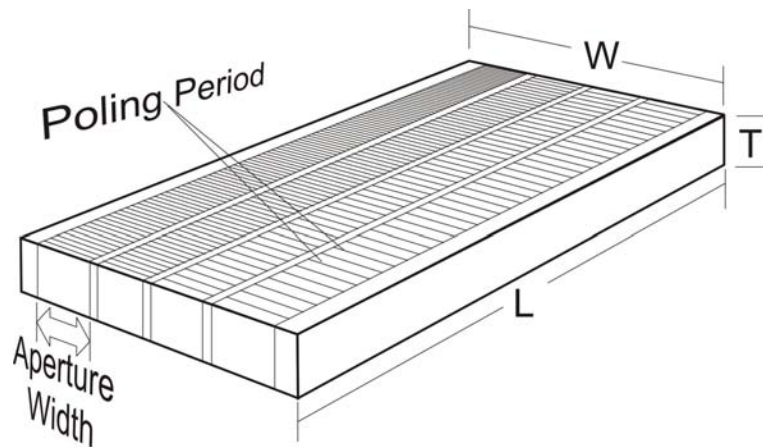
Product Specifications

Material	Periodically poled LiNbO ₃ or MgO-doped LiNbO ₃	
Component dimensions	Length	: 10 mm to 50 mm
	Width	: 15 mm to 20 mm typical, custom sizes available
	Thickness	: 0.5 mm and 1.0 mm (other thicknesses under development)
Aperture width	0.5 mm, 1 mm, 2 mm, or custom sizes	
Polishing	Optically polished, both faces (W x T)	
Scratch/dig	10/5	
Flatness	$\lambda/6$ @ 632.8nm over clear aperture	
Parallelism	30 arc sec	
Perpendicularity	30 arc min	
Orientation	± 1 deg	
AR Coating	Custom tri-band AR coatings available (ex. 1.064, 1.7, & 2.8 μm)	
Nonlinear coefficient	$d_{\text{eff}} \sim 14 \text{ pm/V}$ (varies with wavelength)	
Poling period	Between 25 μm and 31.5 μm	
Output wavelength	$\sim 1.35 \text{ } \mu\text{m}$ to $\sim 3.5 \text{ } \mu\text{m}$ with 1.064 μm pump	

These specifications are approximate. Exact specifications will vary with application. G&H has undertaken an active development program for periodically poled devices.

Other materials, designs, heated cells, and controllers will be offered in the future.

Please check back with us from time to time for the newest developments. We encourage you to contact us with your comments, suggestions and requirements. Our goal is to provide products that meet your needs.



Contact: sales@goochandhousego.com

www.goochandhousego.com